an addressable thin-film heater element ~~in communication with~~ the shape memory alloy portion for activation of selected micro-actuators;

a micro-fabricated sensor; and

connecting rings for separating the micro-actuators into segmented joints.

12. ~~81.~~ (Amended) The shape memory alloy catheter as recited in claim 86 wherein the addressable thin-film heater element is operable to heat at least one micro-actuator for varying the relative stiffness of the shape memory alloy portion.

14. ~~83.~~ (Amended) The shape memory alloy catheter as recited in claim 86 wherein the shape memory alloy portion surrounds at least a portion of the catheter body.

15. ~~84.~~ (Amended) The shape memory alloy catheter as recited in claim 86 wherein the shape memory alloy is NiTi.

16. ~~85.~~ (Amended) The shape memory alloy catheter of claim 86 further including a micro-fabricated transducer.

11. ~~86.~~ (Amended) A shape memory alloy catheter comprising:

a catheter body formed with a sidewall portion;

a shape memory alloy portion positioned adjacent the catheter sidewall portion having a lattice network of individually configured shape memory alloy micro-actuators;

an addressable thin-film heater element ~~in communication with~~ the shape memory alloy portion for activation of selected micro-actuators; and

a micro-fabricated sensor,

wherein at least two of the individually configured shape memory alloy micro-actuators are formed from a single piece of shape memory alloy material.

17. ~~88.~~ (Amended) A shape memory alloy catheter comprising:

a catheter body formed with a sidewall portion;

a shape memory alloy portion positioned adjacent the catheter sidewall portion having a lattice network of individually configured shape memory alloy micro-actuators, wherein the micro-actuators are arranged in segmented joints;

an addressable thin-film heater element ~~in communication with~~ the shape memory alloy portion for activation of selected micro-actuators;

a micro-fabricated transducer; and

connecting rings for separating the micro-actuators into segmented joints.

20. ~~90~~. (Amended) The shape memory alloy catheter as recited in claim ~~95~~ 19 wherein the addressable thin-film heater element is operable to heat at least one micro-actuator for varying the relative stiffness of the shape memory alloy portion.

22. ~~92~~. (Amended) The shape memory alloy catheter as recited in claim ~~95~~ 19 wherein the shape memory alloy portion surrounds at least a portion of the catheter body.

23. ~~93~~. (Amended) The shape memory alloy catheter as recited in claim ~~95~~ 19 further including a micro-fabricated sensor.

24. ~~94~~. (Amended) The shape memory alloy catheter as recited in claim ~~95~~ 19 wherein the shape memory alloy is NiTi.

19. ~~95~~. (Amended) A shape memory alloy catheter comprising:

a catheter body formed with a sidewall portion;

a shape memory alloy portion positioned adjacent the catheter sidewall portion having a lattice network of individually configured shape memory alloy micro-actuators;

an addressable thin-film heater element ~~in communication with~~ the shape memory alloy portion for activation of selected micro-actuators; and

a micro-fabricated transducer,

wherein at least two of the individually configured shape memory alloy micro-actuators are formed from a single piece of shape memory alloy material.

B6 Cncl.

57

E